

Routine Chest X-rays Of All Patients Admitted To General Hospitals

THE NUMBER of hospitals in the United States having facilities for routine admission X-rays has greatly increased since 1948. This development is due to some extent to the efforts of the National Tuberculosis Association and the American Hospital Association, which, with the cooperation of the Chronic Disease and Tuberculosis Program of the Public Health Service, for several years have been promoting routine chest X-ray examinations of all general hospital admissions.

The increase is particularly encouraging since the yield from this method of case finding has been high. The amount of tuberculosis discovered depends, of course, upon the kinds of patients admitted. From various studies we have found that hospital X-ray screening not only uncovers a high rate of active tuberculosis (2 to 4 cases per 1,000), but in addition, discovers many persons with suspected cardiovascular disease and other nontuberculous chest pathology. For instance, among 214,851 persons X-rayed on admission to general hospitals in New York State during 1951, there were 3.58 persons per 1,000 X-rayed whose films indicated active tuberculosis, 4.59 persons whose films indicated suspected tuberculosis, and 110.40 persons whose films indicated other conditions. In 1948 and 1949, 80 percent of all the tuberculosis cases found in New York's hospital admission screening programs were new cases not previously reported (1).

Another noteworthy result of this method may be seen in the findings of three Chicago area hospitals—the Cook County, the Provi-

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dent, and the Mercy. During a recent 4-year period, 8,760 tuberculosis suspects were uncovered from among 292,000 persons X-rayed on admission to the 3 hospitals (2). Because of the fruitful yield of this technique, routine admission chest X-ray programs are an economical approach to the problem of case finding.

Many of the hospitals that report having facilities for routine admission chest X-rays, however, do not X-ray all admissions. There are various reasons for this. It is not always possible, for example, to X-ray all obstetrical cases or all persons who are admitted for emergency medical or surgical treatment. There is, of course, little point in repeating the routine X-raying of persons readmitted within a very short time. Moreover, it is always desirable to avoid unnecessary exposure to X-rays.

The following tables, compiled from information found in *Hospitals* (3), give a picture of the facilities at present available in the United States for routine admission chest X-rays. Table 1 shows the proportion of hospitals of various sizes that have facilities for routine chest X-ray on admission. As pointed out above, not all admissions to these hospitals receive an X-ray.

It should be noted that as the hospitals increase in size, the percentage of hospitals in each category having facilities for routine chest X-ray on admission also increases. In hospitals with 250 beds and over, nearly 50 percent report

Table 1. General and special short-term hospitals with facilities for routine chest X-ray on admission, 1952¹

Number of beds	Number of hospitals having facilities	Percent of total hospitals	Estimated admissions to hospitals with facilities	Percent of total admissions with access to facilities
Under 50-----	287	12.5	288,450	12.5
50-99-----	213	17.9	510,472	16.6
100-249-----	301	26.0	1,575,940	24.7
250 and over---	218	46.1	2,660,716	47.1
Total----	1,019	19.9	5,035,578	28.9

¹ Information generally for 1952, but in a few instances where no report for 1952 was received, earlier data were used.

Table 2. General and special short-term hospitals with facilities for routine chest X-rays on admissions, by State, 1952

State	Number of hospitals	Hospitals with facilities for routine chest X-rays ¹		State	Number of hospitals	Hospitals with facilities for routine chest X-rays ¹	
		Number	Percent			Number	Percent
United States total	5, 122	1, 019	19. 9	Nebraska	99	15	15. 2
Alabama	92	18	19. 6	Nevada	11	2	18. 2
Arizona	38	8	21. 1	New Hampshire	33	2	6. 1
Arkansas	66	6	9. 1	New Jersey	99	16	16. 2
California	273	64	23. 4	New Mexico	31	4	12. 9
Colorado	75	10	13. 3	New York	339	121	35. 7
Connecticut	40	16	40. 0	North Carolina	148	17	11. 5
Delaware	9	4	44. 4	North Dakota	41	6	14. 6
District of Columbia	16	4	25. 0	Ohio	185	40	21. 6
Florida	120	21	17. 5	Oklahoma	99	14	14. 1
Georgia	121	11	9. 1	Oregon	64	6	9. 4
Idaho	46	6	13. 0	Pennsylvania	251	60	23. 9
Illinois	241	97	40. 2	Rhode Island	14	3	21. 4
Indiana	112	24	21. 4	South Carolina	59	4	6. 8
Iowa	111	12	10. 8	South Dakota	50	7	14. 0
Kansas	120	9	7. 5	Tennessee	118	21	17. 8
Kentucky	94	24	25. 5	Texas	470	57	12. 1
Louisiana	106	17	16. 0	Utah	28	4	14. 3
Maine	41	10	24. 4	Vermont	23	3	13. 0
Maryland	44	10	22. 7	Virginia	91	20	22. 0
Massachusetts	142	37	26. 1	Washington	100	17	17. 0
Michigan	195	58	29. 7	West Virginia	67	12	17. 9
Minnesota	171	26	15. 2	Wisconsin	144	31	21. 5
Mississippi	89	11	12. 4	Wyoming	27	3	11. 1
Missouri	123	25	20. 3				
Montana	46	6	13. 0				

¹ Information generally for 1952, but in a few instances where no report for 1952 was received, earlier data were used.

having such facilities. Similarly, the proportion of admissions having access to these facilities increases with the size of the hospital. The proportion of admissions actually X-rayed is not known.

Compiled from the same source, table 2 shows by State the number of general hospitals with facilities for routine chest X-ray of admissions.

In no State does a majority of hospitals report having facilities for routine chest X-rays on admission. To illustrate the variation between States: In 4 States, more than one-third of the hospitals report that they have such facilities, while in each of 6 other States, the total is less than 10 percent.

Although we have seen fairly good progress in recent years, we must acknowledge the facts that more than half of the larger general and

special short-term hospitals still lack facilities for routine admission chest X-rays, and that this percentage is even greater among the smaller hospitals. Consequently, greater efforts will need to be made in interesting more hospitals in this productive activity. Only thus can further progress be assured.

REFERENCES

- (1) Siegal, W., Plunkett, R. E., and Hilleboe, H. E.: Chest X-rays on admission pay off—to patients, hospital staff, and community. *Mod. Hosp.* 76: 98-108 (July 1951).
- (2) Tuberculosis Institute of Chicago and Cook County: Hospital admission X-rays uncover 8,760 TB suspects in Chicago area. *Challenge* 8:10 (Oct. 1953).
- (3) Hospitals. Administrators guide issue. Vol. 27, June 1953, part 2.